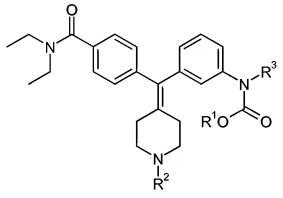
In the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

Listings of claims

1. (original) A compound of formula I, a pharmaceutically acceptable salt thereof, diastereomers, enantiomers, or mixtures thereof:



I

wherein

R^1 and R^3 are, independently, selected from hydrogen, C_{1-6}alkyl, and C_{3-6}cycloalkyl, wherein said C_{1-6}alkyl and C_{3-6}cycloalkyl are optionally substituted with one or more groups selected from -R, -NO_2, -OR, -Cl, -Br, -I, -F, -CF_3, -C(=O)R, -C(=O)OH, -NH_2, -SH, -NHR, -NR_2, -SR, -SO_3H, -SO_2R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6}alkyl; and

R^2 is selected from C_{1-6}alkyl, C_{2-6}alkenyl, C_{3-6}cycloalkyl, and C_{3-6}cycloalkyl-C_{1-4}alkyl, wherein said C_{1-6}alkyl, C_{2-6}alkenyl, C_{3-6}cycloalkyl, and C_{3-6}cycloalkyl-C_{1-4}alkyl are optionally substituted with one or more groups selected from -R, -NO_2, -OR, -Cl, -Br, -I, -F, -CF_3, -C(=O)R, -C(=O)OH, -NH_2, -SH, -NHR, -NR_2, -SR, -SO_3H, -SO_2R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen, C_{3-6}cycloalkyl or C_{1-6}alkyl.

2. (original) A compound according to claim 1,

wherein R^1 is C_{1-3}alkyl;

R^3 is hydrogen; and

R^2 is selected from C_{1-6}alkyl and C_{3-6}cycloalkyl-methyl, wherein said C_{1-6}alkyl and C_{3-6}cycloalkyl-methyl are optionally substituted with one or more groups selected from methoxy, ethoxy and isopropoxy.

3. (original) A compound according to claim 1,

wherein R^1 is selected from C_{1-3}alkyl and halogenated C_{1-3}alkyl;

R^3 is selected from hydrogen, C_{1-6}alkyl, and C_{3-6}cycloalkyl, wherein said C_{1-6}alkyl and C_{3-6}cycloalkyl are optionally substituted with one or more groups selected from C_{1-6}alkyl, halogenated C_{1-6}alkyl, $-NO_2$, $-CF_3$, C_{1-6} alkoxy, chloro, fluoro, bromo, and iodo; and

R^2 is selected from C_{1-6}alkyl, C_{3-6}cycloalkyl and C_{3-6}cycloalkyl-methyl, wherein said C_{1-6}alkyl, C_{3-6}cycloalkyl and C_{3-6}cycloalkyl-methyl are optionally substituted with one or more groups selected from C_{1-6}alkyl, halogenated C_{1-6}alkyl, $-CF_3$, C_{1-6}alkoxy, chloro, fluoro and bromo.

4. (original) A compound according to claim 1,

wherein R^1 is selected from methyl and ethyl;

R^3 is hydrogen; and

R^2 is selected from n-propyl, cyclopropylmethyl, n-pentyl, 2-methoxyethyl, n-butyl, 2-isopropoxyethyl, 2-ethoxyethyl, 3-methoxypropyl, cyclobutylmethyl, methyl, and ethyl.

5. (original) A compound according to claim 1, wherein the compound is selected from:

COMPOUND 1: methyl [3-[[4-[(diethylamino)carbonyl]phenyl](1-propyl-4-piperidinylidene)methyl]phenyl]carbamate;

COMPOUND 2: methyl [3-[[1-(cyclopropylmethyl)-4-piperidinylidene][4-[(diethylamino)carbonyl]phenyl]methyl]phenyl]carbamate;

COMPOUND 3: methyl [3-[[4-[(diethylamino)carbonyl]phenyl](1-pentyl-4-piperidinylidene)methyl]phenyl]carbamate;

COMPOUND 4: ethyl [3-[[4-[(diethylamino)carbonyl]phenyl](1-propyl-4-piperidinylidene)methyl]phenyl]carbamate;

COMPOUND 5: ethyl [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-methoxyethyl)-4-piperidinylidene]methyl]phenyl]carbamate;

COMPOUND 6: ethyl [3-[(1-butyl-4-piperidinylidene)[4-[(diethylamino)carbonyl]phenyl]methyl]phenyl]carbamate;

COMPOUND 7: [3-[[4-[(diethylamino)carbonyl]phenyl][1-[2-(1-methylethoxy)ethyl]-4-piperidinylidene]methyl]phenyl]- carbamic acid, methyl ester;

COMPOUND 8: [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-ethoxyethyl)-4-piperidinylidene]methyl]phenyl]- carbamic acid, methyl ester;

COMPOUND 9: methyl 3-((1-butylpiperidin-4-ylidene){4-[(diethylamino)carbonyl]phenyl}methyl)phenylcarbamate;

COMPOUND 10: methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[1-(3-methoxypropyl)piperidin-4-ylidene]methyl}phenylcarbamate;

COMPOUND 11: methyl 3-([1-(cyclobutylmethyl)piperidin-4-ylidene]{4-[(diethylamino)carbonyl]phenyl}methyl)phenylcarbamate;
COMPOUND 12: methyl 3-[{4-[(diethylamino)carbonyl]phenyl}(1-methylpiperidin-4-ylidene)methyl]phenylcarbamate;
COMPOUND 13: methyl 3-[{4-[(diethylamino)carbonyl]phenyl}(1-ethylpiperidin-4-ylidene)methyl]phenylcarbamate;
COMPOUND 14: ethyl 3-([1-(cyclopropylmethyl)piperidin-4-ylidene]{4-[(diethylamino)carbonyl]phenyl}methyl)phenylcarbamate;
COMPOUND 15: ethyl {3-[{4-[(diethylamino)carbonyl]phenyl}(1-methylpiperidin-4-ylidene)methyl]phenyl}carbamate;
COMPOUND 16: ethyl {3-[[4-(aminocarbonyl)phenyl](1-ethylpiperidin-4-ylidene)methyl]phenyl}carbamate;
COMPOUND 17: [3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-methoxyethyl)-4-piperidinylidene]methyl]phenyl]- carbamic acid, methyl ester;
and pharmaceutically acceptable salts thereof.

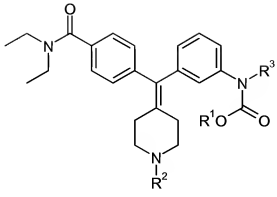
6-7 (cancelled)

8. (currently amended) A pharmaceutical composition comprising a compound according to ~~any one of~~ claims 1-~~5~~ and a pharmaceutically acceptable carrier.

9. (currently amended) A method for the therapy of pain in a warm-blooded animal, comprising the step of administering to said animal in need of such therapy a therapeutically effective amount of a compound according to ~~any one of~~ claims 1-~~5~~.

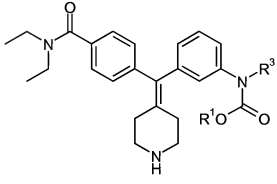
10. (currently amended) A method for the therapy of functional gastrointestinal disorders in a warm-blooded animal, comprising the step of administering to said animal in need of such therapy a therapeutically effective amount of a compound according to ~~any one of~~ claims 1-~~5~~.

11. (original) A process for preparing a compound of formula I, comprising:



I

reacting a compound of formula II with R^2-X:



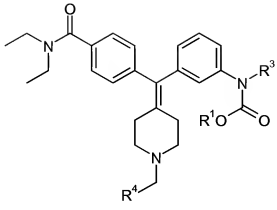
II

wherein X is halogen;

R^1 and R^3 are, independently, selected from hydrogen, C_{1-6}alkyl, and C_{3-6}cycloalkyl, wherein said C_{1-6}alkyl and C_{3-6}cycloalkyl are optionally substituted with one or more groups selected from -R, -NO_2, -OR, -Cl, -Br, -I, -F, -CF_3, -C(=O)R, -C(=O)OH, -NH_2, -SH, -NHR, -NR_2, -SR, -SO_3H, -SO_2R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6}alkyl; and

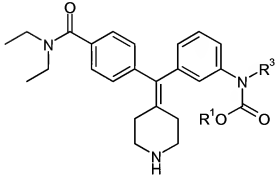
R^2 is selected from C_{1-6}alkyl, C_{2-6}alkenyl, C_{3-6}cycloalkyl, and C_{3-6}cycloalkyl-C_{1-4}alkyl, wherein said C_{1-6}alkyl, C_{2-6}alkenyl, C_{3-6}cycloalkyl, and C_{3-6}cycloalkyl-C_{1-4}alkyl are optionally substituted with one or more groups selected from -R, -NO_2, -OR, -Cl, -Br, -I, -F, -CF_3, -C(=O)R, -C(=O)OH, -NH_2, -SH, -NHR, -NR_2, -SR, -SO_3H, -SO_2R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6}alkyl.

12. (original) A process for preparing a compound of formula III, comprising:



III

reacting a compound of formula II with R^4-CHO:



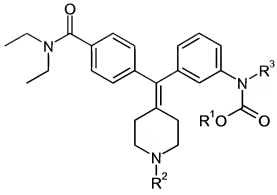
II

,

wherein R^1 and R^3 are, independently, selected from hydrogen, $C_{1\text{-}6}$alkyl, and $C_{3\text{-}6}$cycloalkyl, wherein said $C_{1\text{-}6}$alkyl and $C_{3\text{-}6}$cycloalkyl are optionally substituted with one or more groups selected from -R, $-NO_2$, -OR, -Cl, -Br, -I, -F, $-CF_3$, -C(=O)R, -C(=O)OH, $-NH_2$, -SH, -NHR, $-NR_2$, -SR, $-SO_3H$, $-SO_2R$, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or $C_{1\text{-}6}$alkyl; and

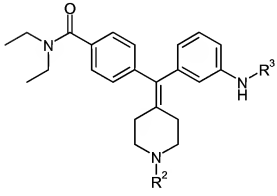
R^4 is selected from $C_{1\text{-}6}$alkyl, $C_{2\text{-}6}$alkenyl, $C_{3\text{-}6}$cycloalkyl, and $C_{3\text{-}6}$cycloalkyl-$C_{1\text{-}4}$alkyl, wherein said $C_{1\text{-}6}$alkyl, $C_{2\text{-}6}$alkenyl, $C_{3\text{-}6}$cycloalkyl, and $C_{3\text{-}6}$cycloalkyl-$C_{1\text{-}4}$alkyl are optionally substituted with one or more groups selected from -R, $-NO_2$, -OR, -Cl, -Br, -I, -F, $-CF_3$, -C(=O)R, -C(=O)OH, $-NH_2$, -SH, -NHR, $-NR_2$, -SR, $-SO_3H$, $-SO_2R$, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or $C_{1\text{-}6}$alkyl.

13. (original) A process for preparing a compound of formula I, comprising:



I

reacting a compound of formula IV with R^1O-C(=O)-X:



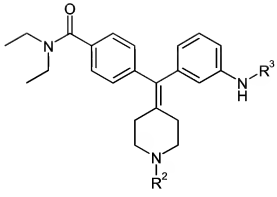
IV ,

wherein X is halogen;

R^1 and R^3 are, independently, selected from hydrogen, C_{1-6}alkyl, and C_{3-6}cycloalkyl, wherein said C_{1-6}alkyl and C_{3-6}cycloalkyl are optionally substituted with one or more groups selected from -R, -NO_2, -OR, -Cl, -Br, -I, -F, -CF_3, -C(=O)R, -C(=O)OH, -NH_2, -SH, -NHR, -NR_2, -SR, -SO_3H, -SO_2R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6}alkyl; and

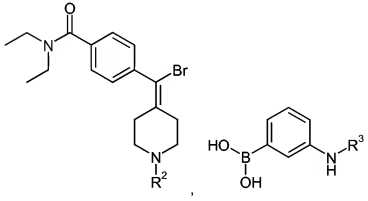
R^2 is selected from C_{1-6}alkyl, C_{2-6}alkenyl, C_{3-6}cycloalkyl, and C_{3-6}cycloalkyl-C_{1-4}alkyl, wherein said C_{1-6}alkyl, C_{2-6}alkenyl, C_{3-6}cycloalkyl, and C_{3-6}cycloalkyl-C_{1-4}alkyl are optionally substituted with one or more groups selected from -R, -NO_2, -OR, -Cl, -Br, -I, -F, -CF_3, -C(=O)R, -C(=O)OH, -NH_2, -SH, -NHR, -NR_2, -SR, -SO_3H, -SO_2R, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or C_{1-6}alkyl.

14. (original) A process for preparing a compound of formula IV, comprising:



IV

reacting a compound of formula V with a compound of formula VI or esters thereof:

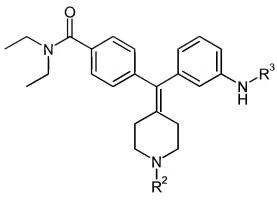


V VI

wherein R^3 is selected from hydrogen, $C_{1\text{-}6}$alkyl, and $C_{3\text{-}6}$cycloalkyl, wherein said $C_{1\text{-}6}$alkyl and $C_{3\text{-}6}$cycloalkyl are optionally substituted with one or more groups selected from -R, $-NO_2$, -OR, -Cl, -Br, -I, -F, $-CF_3$, -C(=O)R, -C(=O)OH, $-NH_2$, -SH, -NHR, $-NR_2$, -SR, $-SO_3H$, $-SO_2R$, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or $C_{1\text{-}6}$alkyl; and

R^2 is selected from $C_{1\text{-}6}$alkyl, $C_{2\text{-}6}$alkenyl, $C_{3\text{-}6}$cycloalkyl, and $C_{3\text{-}6}$cycloalkyl-$C_{1\text{-}4}$alkyl, wherein said $C_{1\text{-}6}$alkyl, $C_{2\text{-}6}$alkenyl, $C_{3\text{-}6}$cycloalkyl, and $C_{3\text{-}6}$cycloalkyl-$C_{1\text{-}4}$alkyl are optionally substituted with one or more groups selected from -R, $-NO_2$, -OR, -Cl, -Br, -I, -F, $-CF_3$, -C(=O)R, -C(=O)OH, $-NH_2$, -SH, -NHR, $-NR_2$, -SR, $-SO_3H$, $-SO_2R$, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or $C_{1\text{-}6}$alkyl.

15. (original) A compound of formula IV, a pharmaceutically acceptable salt thereof, diastereomers, enantiomers, or mixtures thereof:



IV

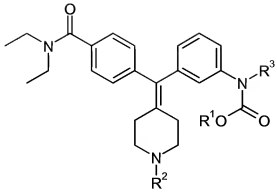
wherein R^3 is selected from hydrogen, $C_{1\text{-}6}$alkyl, and $C_{3\text{-}6}$cycloalkyl, wherein said $C_{1\text{-}6}$alkyl and $C_{3\text{-}6}$cycloalkyl are optionally substituted with one or more groups selected from -R, $-NO_2$, -OR, -Cl, -Br, -I, -F, $-CF_3$, -C(=O)R, -C(=O)OH, $-NH_2$, -SH, -NHR, $-NR_2$, -SR, $-SO_3H$, $-SO_2R$, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or $C_{1\text{-}6}$alkyl; and

R^2 is selected from $C_{1\text{-}6}$alkyl, $C_{2\text{-}6}$alkenyl, $C_{3\text{-}6}$cycloalkyl, and $C_{3\text{-}6}$cycloalkyl-$C_{1\text{-}4}$alkyl, wherein said $C_{1\text{-}6}$alkyl, $C_{2\text{-}6}$alkenyl, $C_{3\text{-}6}$cycloalkyl, and $C_{3\text{-}6}$cycloalkyl-$C_{1\text{-}4}$alkyl are optionally substituted with one or more groups selected from -R, $-NO_2$, -OR, -Cl, -Br, -I, -F, $-CF_3$, -C(=O)R, -C(=O)OH, $-NH_2$, -SH, -NHR, $-NR_2$, -SR, $-SO_3H$, $-SO_2R$, -S(=O)R, -CN, -OH, -C(=O)OR, -C(=O)NR_2, -NRC(=O)R, and -NRC(=O)-OR, wherein R is, independently, a hydrogen or $C_{1\text{-}6}$alkyl.

16. (original) A compound as claimed in claim 15, wherein the compound is selected from 4-[(3-aminophenyl)[1-(2-methoxyethyl)-4-piperidinylidene]methyl]-*N*,*N*-diethyl-benzamide and pharmaceutically acceptable salts thereof.

17. (original) A compound selected from:
[3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-ethoxyethyl)-4-piperidinylidene]methyl]phenyl]-carbamic acid, methyl ester;
methyl 3-{{4-[(diethylamino)carbonyl]phenyl}[1-(3-methoxypropyl)piperidin-4-ylidene]methyl}phenylcarbamate;
[3-[[4-[(diethylamino)carbonyl]phenyl][1-(2-methoxyethyl)-4-piperidinylidene]methyl]phenyl]-carbamic acid, methyl ester; and pharmaceutically acceptable salts thereof.

18. (original) A compound of formula I or pharmaceutically acceptable salts thereof,



I

wherein R^3 is hydrogen, R^1 is selected from methyl and ethyl; and R^2 is C_{1-3}alkoxy-C_{1-4}alkyl.

19. (new) A method for the therapy of anxiety in a warm-blooded animal, comprising the step of administering to said animal in need of such therapy a therapeutically effective amount of a compound according to claim 1.